TESTIMONY

of

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U.S. SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION, SUBCOMMITTEE ON OCEANS, ATMOSPHERE, FISHERIES AND COAST GUARD

EXPLORING NATIVE AMERICAN SUBSISTENCE RIGHTS AND INTERNATIONAL TREATIES

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Executive Summary

The bowhead whale population along the coast of Alaska is healthy and growing. Our last count in 2011 showed that it contained almost 17,000 whales. When combined with past counts, the 2011 data show that the bowhead population has been growing at 3.7% per year since 1978. If this rate of growth has continued, there are now about 21,000 whales in the population. Observations of record high calf counts and harvested whales that are very healthy provide support for the assumption that the population has continued to grow.

The bowhead harvest by the Alaska Eskimo Whaling Commission and Chukotka Natives in Russia is only a small percentage (<0.25%) of the population. The Scientific Committee (SC) of the International Whaling Commission (IWC) confirms that the harvest is sustainable. Their conclusions are based on a sophisticated modeling tool (i.e., a Strike Limit Algorithm) that evaluates the possible conservation risk to the bowhead population while also meeting nutritional and cultural needs of aboriginal people in Alaska and Chukotka.

In the past, some member nations of the IWC blocked the bowhead quota based on politics. It is important that future efforts to renew the quota, including in 2018, be based primarily on information about the population status and health of whales and the documented need of subsistence communities. The bottom line for bowhead whales is that the population is large and can easily sustain the level of harvest required to meet Alaska and Chukotka Native needs. The science about bowheads and the local management of the hunt by the Alaska Eskimo Whaling Commission provide justification and support for the quota request in 2018 and we will collectively do all we can to continue to make data available for making informed decisions in the future.

Testimony

My name is Robert Suydam. I am a Senior Wildlife Biologist with the North Slope Borough (NSB) Department of Wildlife Management. I have lived in Utqiaġvik (formerly known as Barrow) and worked for the NSB since 1990. The NSB is the equivalent of a county government that encompasses the entire North Slope of Alaska. Our Department includes 7 Ph.D. level biologists or veterinarians and a similar number of subsistence hunters. It is unique for a municipal government to have its own science program but shows the commitment of the Inupiat of Northern Alaska to ensuring that high quality data are available for making the informed management decisions needed for a sustainable harvest.

I have a Ph.D. in Aquatic and Fishery Sciences from the University of Washington and a Master's in Biology from the University of Alaska, Fairbanks. I am the Vice-Chair of the International Whaling Commission's (IWC) Scientific Committee (SC) and will begin serving as Chair in May 2018. I also serve on the U.S. Marine Mammal Commission's Committee of Scientific Advisors. Today I would like to provide you with information about the population status of the bowhead whales that occur in the Bering, Chukchi and Beaufort seas.

Figure 1. Bowhead whales migrating past Point Barrow during spring (left). A subsistence harvested bowhead whale provides for the nutritional and cultural needs of Inuit in Alaska (right).

The bowhead population is doing exceedingly well. Our last successful count was in 2011 when we estimated there were 16,820 whales (95% confidence interval: 15,176-18,643). Combined with past counts, the 2011 data show that the bowhead population has been growing at 3.7% per year since 1978 (95% confidence interval: 2.9%-4.6%). Assuming this growth rate has continued, it is likely that the bowhead population now numbers near 21,000 whales. Recent data, including record high counts of bowhead calves seen during aerial surveys (flown by National Marine Fisheries Service [NMFS] with funding from the Bureau of Ocean Energy Management) this autumn, provide evidence that the population has continued to grow. Other

supporting evidence that the population is growing is our Department's examination of harvested whales. Those animals are almost always healthy, in good body condition, and have surprisingly few diseases or parasites.

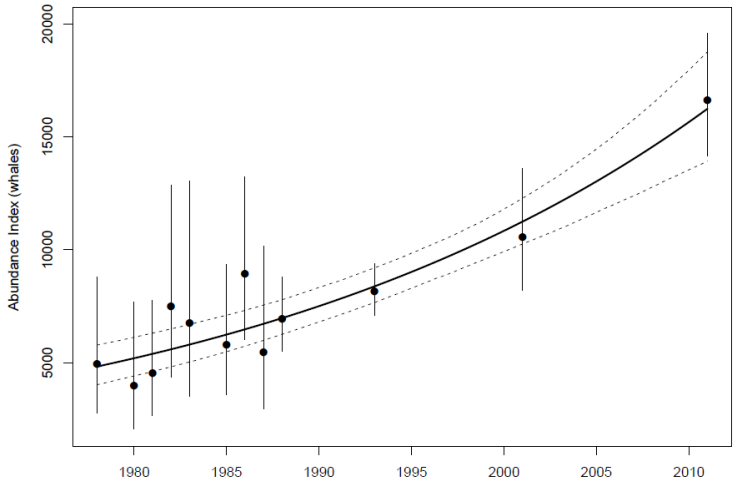

Figure 2. Bowhead whale population estimates (with corresponding 95% confidence intervals) from 1978 to 2011 showing a growth rate of 3.7% per year.

The SC uses population data and models to provide advice to the Commission about safe quota levels for subsistence harvests. The SC bases its advice on Strike Limit Algorithms (SLA), sophisticated and extensively tested computer models about whale population dynamics. The first SLA developed by the SC was for bowheads, initially implemented in 2003. SLAs now have been developed for most other subsistence stocks, including gray whales. SLAs give informed advice that balances the conservation of whale stocks with subsistence needs.

Most of the current quota for bowheads is used in Alaska. However, subsistence communities in Chukotka, that primarily harvest gray whales, also take a small number of bowhead whales on a periodic basis. Prior to 1997, the entire IWC quota for bowhead whales was used in Alaska. Since 1997, the U.S. and Russia have shared the IWC's bowhead whale quota pursuant to a bilateral agreement. The entire IWC quota for gray whales currently is used in Russia. When the U.S. again allows the Makah to harvest gray whales, the U.S. will need to negotiate a bilateral agreement with Russia for sharing the gray whale quota; it will not be necessary to seek a new gray whale quota from the IWC.

During their development, extensive testing of the SLAs was done by running trials called "simulations." The simulations tested the SLAs in a broad range of hypothetical, but feasible, situations, including major periodic die-offs of the whale population. Such die-offs do not appear likely at this time, but are feasible given the unknown effects of changing sea ice and climate conditions, or in the event of a major oil spill. The results for each simulation were then

evaluated for how well they met the IWC's conservation goals for protecting whales and how well they met subsistence needs. Under those simulations, the SLAs appropriately reduced quotas when there was a need to conserve whales. The results of the evaluations led the SC to conclude that SLAs are the best tool for sustainably managing bowhead and other subsistence whale harvests.

Counts of bowheads were initiated by the National Marine Fisheries Service (NMFS) in the mid-1970s. Because of concerns within the North Slope community that NMFS was not listening to elders or expert hunters about proper counting methods, the NSB began counting bowheads in the early 1980s. Counts were conducted yearly but as data were collected, it was obvious that the bowhead population was growing steadily. Because of the high quality of the data and the life history traits of bowheads, the SC agreed that population estimates would only be needed every 10 years. Since our last count was in 2011, and it usually takes several years to successfully collect good data, we have already begun planning for a bowhead count in spring 2019.

Dr. Tom Albert, one of my mentors and predecessors, worked closely with Harry Brower, Sr., father of Mayor Harry Brower Jr., who you have also heard from today. Harry Sr. told Tom that bowheads were migrating beyond the view of whale counters and that whales were not afraid of sea ice. He said that bowheads continued to migrate under the ice even when there was no visible open water. Whales could break through ice to make their own breathing holes. Because of this advice, the bowhead count broke new ground by monitoring the calls and songs of whales to adjust the visual counts for whales that passed beyond the view of counters. This novel approach was the first time acoustic recordings were used to estimate the size of a whale population, but is now regularly used to monitor other marine mammal populations.

Hunters inform NSB scientists about many other aspects of the biology and population status of bowheads. They also help to keep us safe while we work on the sea ice counting whales and collecting biological samples from harvested whales. Hunters participate in many other aspects of science such as tagging bowheads with satellite transmitters.

For the past 35 years, the NSB has invested heavily in bowhead science, with additional support from NMFS, oil companies and others. We work with scientists from across the US and around the world. Our program is highly regarded and well published. Hundreds of peer-reviewed publications and numerous theses and dissertations have resulted from the research. One of our statisticians, Judy Zeh from the University of Washington, has worked with us since the early 1980s. She has been instrumental in a variety of aspects of our program and she served as the IWC SC chair from 2000 to 2002. The bowhead program brings to the IWC a balanced approach to management of whales. The respect for the bowhead science program is reflected in Judy's roll as a past Chair of the SC and my upcoming role as Chair.

The scientific results from the bowhead science program are valuable but more importantly the NSB's investment has resulted in successful population counts and the construction and implementation of the bowhead SLA. The tools and scientific information are available for making informed decisions about a sustainable bowhead quota that also meets subsistence needs.

The bowhead science program is also valuable as the Arctic is changing rapidly and dramatically. The combination and integration of science and traditional knowledge is essential for collecting information to support informed decision-making in the Arctic. Right now bowheads are responding well to reductions in sea ice. Whales, especially immature whales are in better body conditions in years with less ice in the Beaufort Sea than in years with more. It is likely that more sunlight penetrating the water has increased productivity, resulting in more food for bowheads. Even though bowheads are doing well, the changes in sea ice are making it more difficult for whale hunters and scientists. We are struggling to deal with the thinner and less safe ice. We do not have substantial pressure ridges in the shore-fast ice from which to count whales. We are concerned that it will be more and more difficult to count bowheads in the future, but we are actively considering new approaches and options.

In the past, some member nations of the IWC blocked the bowhead quota request for political reasons. It is important that future efforts to renew the quota, including in 2018, be based primarily on information about the population status of whales and the documented need of subsistence communities. The bottom line for bowhead whales is that the population is large and can easily sustain the small harvest required to meet Alaskan and Chukotkan Eskimo subsistence needs. The science about bowheads and the local management of the hunt by the Alaska Eskimo Whaling Commission provide justification and support for the quota request in 2018 and we will collectively do all we can to continue to make data available for making informed decisions in the future.

Thank you for allowing me to provide you some information about the science and management of bowhead whales. I would be happy to try to answer your questions.